

July 22, 2003

## Hairy Buffalo migrates to C-130 for Homeland Security missions

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NAVAIR Network Centric Warfare

Deputy Homeland Security Secretary Gordon England, Coast Guard Commandant Admiral Thomas Collins, and Congressman Steny Hoyer received a demonstration of the Hairy Buffalo's homeland security and defense capabilities July 14 at NAVAIR Patuxent River, Md.

Under a proposal to the U.S. Coast Guard, NAVAIR would outfit six C-130J aircraft with a scalable, roll-on/roll-off, tactical command, control, communications, computers, intelligence surveillance and reconnaissance suite, tailored to support a variety of homeland security and defense missions.

The Coast Guard proposal is a slimmed down version of the teams "Hairy Buffalo II" design initiative that the team has submitted as an FY-05 ACTD candidate. The new configuration migrates the original Hairy Buffalo C4ISR systems architecture (successfully demonstrated on a modified NP-3C) to the C-130 series aircraft, with the addition of generic, flight cleared sensor pods, operator pallets and shelters.

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Under the Hairy Buffalo II proposal, "NAVAIR is serving as the primary systems architect, selecting the best of breed communications, sensor and mission systems to address specific mission requirements," said Cmdr. Ron Carvalho, Hairy Buffalo project lead and deputy for experimentation for NAVAIR's Network Centric Warfare Office. "We're insisting on an open systems, non-proprietary approach that provides for maximum flexibility and interoperability, enabling rapid technology insertion and decreased integration costs." Industry will provide expertise and integration assistance for the systems employed in the Hairy Buffalo II.

According to Carvalho, discussions are currently underway to determine the most rapid and cost-effective approach for conducting research, development, test and evaluation on the new configuration, including the potential of hosting one of the Coast Guard C-130s at Patuxent River.

"We [NAVAIR] will work in a joint development environment with the customer and industry to evaluate technologies and tactical doctrine, as well as training, logistics, and related systems support requirements," said Carvalho.

The Advanced Concept Technology Demonstration project will result in a rapidly fielded, low cost, and service independent system using existing joint and international C-130 aircraft. One of the key objectives of Hairy Buffalo-II is to design a full roll-on/roll-off mission-tailored C4ISR suite that can be installed on any C-130 model within 24 hours with out requiring permanent physical modification to the aircraft.

The Hairy Buffalo II system consists of an operator pallet, C4 shelter, and wing mounted ISR sensor pods based on Lockheed Martin's reconfigurable SAMSON pod design. The sensors will provide all-weather static and moving target detection, tracking, identification, and targeting, for a variety of applications, including close air support, chemical/biological/radiological detection, and search and rescue. The operator pallet can be configured with up to four, mission-tailored operator positions that will perform sensor analysis and fusion, covering all mission phases. A 20-foot command, control, communications, and computer (C4) shelter, built by BAE Systems, will house the mission systems for processing sensor information into actionable targeting data. The Hairy Buffalo II C4 shelter is completely platform independent, suitable for ship and ground-based applications in addition to the C-130 configuration.

The Hairy Buffalo II builds on a legacy of successful "firsts" in demonstrating future network centric, naval aviation capabilities. NAVAIR's original NCW testbed was the first P-3 platform accredited as an airborne local area network. The Hairy Buffalo was the first Navy fixed-wing platform to demonstrate "Level IV" control of a UAV during flight – providing on-board control of the UAV and its sensors, and acting as an airborne C4ISR collection node. And Hairy Buffalo was the first aircraft to demonstrate use of the Precision Targeting Workstation for airborne sensor registration, providing direct targeting to F-15 and F/A-18 aircraft for weapons engagement.

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"Our integrated government/industry team is aggressively implementing a proven, low risk approach to the rapid design and integration of future Persistent ISR, Time Critical Targeting and NCW capabilities – which are clearly suited for a variety of Homeland Security and Defense missions," said Carvalho.

Specializing in the development, integration, support and sustainment of sensors, weapons, aircraft, and related systems, NAVAIR's global network of aviation experts deliver advanced technology solutions and integrated warfighting capabilities to US Navy, Joint and coalition forces worldwide.

021220-N-7590D-044 U.S. Coast Guard Air Station Barbers Point, Hawaii (Dec. 20, 2002) -- A U.S. Coast Guard HC-130 "Hercules" aircraft from the U.S. Coast Guard Air Station Barbers Point, Hawaii, performs a homeland security flight over the waters of near Oahu, Hawaii. U.S. Coast Guard is one of several major government agencies that were recently moved under the organizational control of the newly established Department Homeland Security. U.S. Navy photo by Photographer's Mate 1st Class Keith W. DeVinney. (RELEASED)

HB Visit.jpg Congressman Steny Hoyer (D-Md), Deputy Homeland Security Secretary Gordon England, and Coast Guard Commandant Admiral Thomas Collins receive a briefing on NAVAIR's planned Hairy Buffalo II C-130 configuration from Cmdr. Ron Carvalho, Hairy Buffalo II project lead and deputy for experimentation, NAVAIR Network Centric Warfare Office.

